Potentials of Digital Business Models in Tourism—Qualitative Study with German Experts

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Abstract. Digitization is one of the most discussed topics in recent years. The traditional business models are also massively affected by digitization. Still, the impact of digitization and the potentials for business is only being analyzed in detail by few. Therefore, this research work focuses on the potential of digital business models in the tourism industry. The results are based on empirical data from German experts. The data were collected and analyzed using grounded theory. The effects of digitization, such as new technologies or changed customer needs, change the usual business models. In the future, many business models will concentrate on digital technologies. In particular, rating platforms or sharing economy platforms will play an even greater role in tourism. In addition, social networks such as Twitter, Facebook or Instagram will strongly influence the tourism industry. These new technologies will change and shape the tourism industry in the future. More and more offers are available for customers who enjoy traveling. The aim of this qualitative study is to identify the potential of new digital business models in the respective markets.

Keywords: Digital business model · Digitization · Tourism industry · Potentials · Qualitative study

1 Introduction

Today, over 20 billion devices and machines are already connected to each other via the Internet. A trend will continue to rise to half a trillion by 2030 [1]. Digitization is causing an enormous upheaval in the economy and society, in work, consumption, cooperation and communication [2]. The Internet, mobile technologies and general digitization seem to play a major role here. Travelers can plan, book and manage their holidays around the clock or even report on their holidays in the social media and rate them online. The current distribution of roles between customers and providers is undergoing a major upheaval. On the provider side, much is changing due to digitization.

Although the term digitization is widely used, there is no uniform definition in the literature. Digitization has already appeared as a data conversion process from analogue to digital in the course of the third Industrial Revolution. Today, however, the understanding of the term digitization is associated with digital technologies such as big data, Internet of things, cloud and mobile computing [3]. These approaches change value creation processes, which in turn enable the emergence of new business models.

The new digital technologies and tightened competitive conditions in the tourism industry are opening up new opportunities. In the age of digitization, tour operators face the challenge of reaching their customers on all digital channels and offering them as many individual trips as possible [4]. Equally important are the effects of digitization on customers. In the age of digitization, travelers are always online, networked, mobile and well informed. Travelers not only consume their travel but also evaluate, develop, plan and shape the tourism industry through their consumer behavior. According to a study by Härting et al. (2019), every fourth trip is already booked online on the Internet. For this reason, the business models and their processes of companies are also strongly affected by digitization [4]. In the future, the Internet presence of accommodations, sharing platforms such as Airbnb or others will play an increasingly important role and will greatly change the tourism industry. The digital transformation of existing business models will play an increasingly important role because in the age of digitization, competition between companies does not only consist of processes and products but also takes place at the level of business models [5].

The Sect. 2 describes the research methodology for answering the research question: In this context, Sect. 2.1 deals with the design of the study, while Sect. 2.2 provides insights into data collection, and Sect. 2.3 conducts the analysis of the data. Section 3 shows the implications for the benefits of digital business models in the tourism industry in terms of the mentioned constructs in Fig. 1. The last section, Sect. 4, covers the conclusion of the study, which comprises limitations of the study and future research recommendations.

2   Research Design and Data Collection

2.1   Research Design

The generation of potentials of digital business models in tourism is based on the development of a qualitative study. The research method is based on the specifications of the grounded theory (GT) according to Glaser and Strauss [6]. The results are developed during research through a continuous interaction between analysis and data collection [7]. Within the framework of the GT, the study should address a general research topic rather than a fixed problem. All types of data can be used in the implementation of the GT, both qualitative and quantitative. However, the most common form of data collection is expert interviews, which were also used in this study. Although intensive literature research is not part of the GT, the questions in the interview guide are based on derived or open questions from studies already conducted in the study area. The focus is on the development of categories/influencing factors that are related to each other. The influencing factors form the theoretical basis for deriving recommendations for action and hypotheses for answering the research question [8].
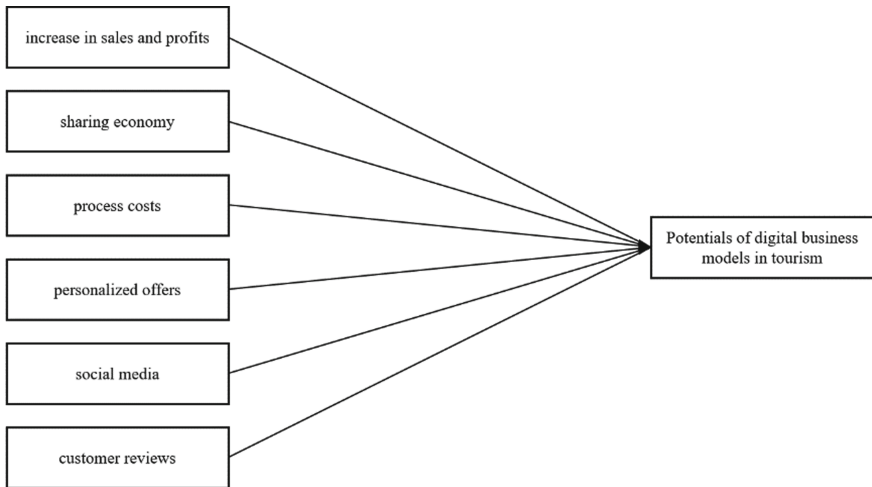
Fig. 1. Hypothesis model

2.2 Data Collection

The experts were selected on the basis of previously defined criteria. It was particularly important that all respondents come from the tourism industry and work in higher positions. A further criterion was that they were familiar with the business models in the industry. For this reason, a calling experience of at least five years in both areas, management responsibility and a company size of at least ten employees are regarded as indispensable. This was followed by the search for what research had been carried out in social networks and in the personal environment. Formal contact was established by e-mail and personal phone calls and through personal visits. In addition, social networks such as Facebook, Xing and LinkedIn were used to contact companies.

In this way, ten experts were found for the interviews (Table 1).

Total of ten experts were interviewed throughout Germany between Jan. 2019 and Feb. 2019. The interviews took place partly by telephone and in discussions directly locally. All interviews were conducted according to the same procedure. To initiate the interview, the study, its objectives and the methodical procedure were first explained.

2.3 Analysis

After completion of the data collection, the interviews were transcribed so that the data could be evaluated. The step of transcription contains a written fixation of the conversation, which contains the literal statements of the interviewees [8]. This was followed by data evaluation based on the grounded theory method according to Glaser and Strauss. The aim of this methodology is to find coherent concepts between the individual interviews and to derive categories [7]. For this purpose, the data were first openly coded, then axially coded and finally selectively coded [9]. The open coding compares the answers of the experts with regard to commonalities. The interview data are compared with each other and examined for their relationships and contexts. This leads

Table 1. Interviewed experts

Pseudonym	Job position of the experts
Anna	Travel agency manager
Franz	Director of operations
Heidi	Hotel manager
Franziska	Travel agency manager
Isabell	Travel agency manager
Frauke	Regional manager
Rainer	Hotel manager
Steffen	Travel agency manager
Herbert	Hotel manager
Hans	Hotel manager

to a first categorization [8]. Using the axial coding method, the authors subcategorized and linked related algorithms with the same property level and dimension [10].

Selective coding was performed to complete the analysis. In this phase, all categories and their indicators are selected and checked for their direct relationship to the core category. This eliminates all categories that are not related to the core category in terms of content [8]. As a result, the model shown in Fig. 1 was developed.

3 Implications for the Benefits of Digital Business Models in the Tourism Industry

The research results are structured according to the representation of the coding paradigm of the GTM. Through the analysis using the GTM, it was again examined whether the following six determinants are regarded as potentials of digital business models. These serve as basis for deriving implications for the exploitation of these potentials in the tourism industry.

The listed examples and quotations are taken from the data material of the interviews carried out. All tested determinants have a positive influence on the business models. One exception, however, is the sharing economy and the reduction of process costs.

3.1 Increase in Sales and Profits

The first positive influencing factor confirmed by the study is that the potential of digital business models leads to an increase in profit and turnover. The experts have made clear statements in this regard that strengthen this focus and about which factors lead to it. Expert Heidi, for example, says about this topic: *"I am sure that things will happen a lot faster because of the willingness of customers to make decisions. I can confirm that this will lead to an increase in sales and therefore profits."* As this example shows, the increase in profit and sales is related to the speed which technologies such as the

Internet provide. Another phenomenon that leads to more sales is that human resources can be leveraged more productively through digitization. Expert Hans stated: *"The staff create more workload than before. It is driven by the support of the new software and systems. Today we have 200 more rooms and we did not have to increase the number of employees. That's why, of course, we are increasing our sales."*

As a result of the results, it can be deduced that the increase in profit and turnover can be seen as a great potential for market growth for the tourism industry.

3.2 Sharing Economy

Sharing economy enables private individuals to offer their apartments on the market. But other sharing possibilities, such as car-sharing or bike-sharing, play also an important role in tourism and offer potential. Above all, however, they are changing the industry, as all the experts surveyed agree. Expert Franz says: *"Yes, I see a change, the change is actually there. Travelers sleep easily and cheaply."* The experts who come from the travel agency see it differently. They see it as new offers for their customers, which is clearly recognizable by the statement of expert Franziska: *"For us it is still a possibility to show the customer another alternative to the usual hotels or vacation homes."* Customer needs have changed a lot over the last few years, which also attracted the attention of experts Hans. *"The needs of customers have changed a lot in recent years. Many people like their holidays to be cozy and intimate. It should feel like home. We can't offer that in a hotel."* Naturally, this possibility of a shared flat gives more choice on the market, which has great potential. Expert Rainer has already recognized this possibility and would like to present it in his hotel. He says: *"In the future, hotels like us will have to follow the trend and see new offers as new opportunities for us. For example, we could set up a bookshelf in our hotel, where every guest can store his old, already read books, and take one he hasn't read yet."*

The following hypothesis, which concentrates on the sharing economy, can be derived: The potential of digital business models in the sharing economy sector leads to more offers in the tourism industry through cheaper pricing.

3.3 Process Costs

The next potential is the reduction of process costs. Less day-to-day business saves a lot of time and enables better communication with customers, as expert Franz confirms. *"We try to let the customers book over the homepage, so we have less work. We also try to communicate clearly via Facebook, with the guests."* Process costs can be saved by implementing many processes digitally, experts even say that personnel can be saved by digital processes. Expert Rainer even says that personnel can be saved at the reception desk. *"Customers can also check in online with us, so in theory we would no longer need a receptionist."* Expert Heidi says on this point: *"On the one hand, you can save costs, but on the other hand, these costs are incurred elsewhere. For example, through system fees for updates, for servers or for the location where the data is managed. For me it's just a shift."* As a result, it can be concluded that process costs can save a lot of time by mapping all processes digitally. The experts see the chance that personnel can be saved, since this creates more through the digital processes than before. The hypothesis in this

area is that the potential of digital business models leads to less personnel requirements due to digital processes.

3.4 Personalized Offers

Personalized offers in the tourism industry have great potential for digital business models. Expert Rainer confirms: *"Personalized offers hold great opportunities to make customers happy and to strengthen their loyalty to us. The trips can be individually customized for each customer according to their needs."* Digital technologies also play an important role in personalized offers because they make everything easier and faster. Suitable offers can be found more quickly and individualized with just a few clicks. Expert Isabell says: *"(…) that digital technologies make it very easy for us to tailor a journey to the person. It only takes a few clicks to individualize the trip for the customer. This saves a lot of time and effort."* With the topic of personalized offers, the experts also associate technologies such as big data, which play a major role. Of course, a lot of time can be saved here as well. Based on individualizing, customers can be better retained. In consequence, following hypothesis can be derived: By the potentials of the personalized offers, customers can be bound better to the enterprise.

3.5 Social Media

The surveyed experts also agree that social media plays an increasingly important role in society. Most experts are already using social media. Only one of the interviewed experts, Herbert, does not use this medium. As a reason for this, he says: *"We are not active in this area at all. Because we simply don't need it."* All other experts already use social media and are active in Facebook, Instagram and WhatsApp to communicate with their customers. In this regard, expert Franz says*: "We are already very active there. We use Facebook for virtually everything: job advertisements, advertising, general communication with guests."* The experts use social media to create offers and distribute them. People can be reached much faster via such channels. A further point that was mentioned in this excerpt is that people can see the offers from anywhere and book them. From these examples, it can be seen that social media offers many possibilities. As a result, it can be stated that platforms such as Facebook, Instagram and WhatsApp have a lot of potential and should definitely be integrated in today's business models. In addition, promotions can be launched to reach many potential customers. Important in the field of social media are influencers on Instagram, who inspire their followers with pictures and thus also advertise the places where the pictures were created. These were briefly addressed by the expert Franz. *"The influencer has also spent the night at our house, she was happy. But we also did everything to make her happy, to be in the best light of course. If something goes wrong, of course you will have a problem."* Finally following hypothesis has been derived: Social media has a positive influence on digital business by helping to spread advertisements worldwide.

3.6 Customer Reviews

All experts share the opinion that customer reviews on rating sections or portals have a great potential and encourage guests to book. Before starting a trip, many customers first

read the reviews on the various review portals, such as Booking.com and TripAdvisor. These reviews significantly influence the purchase decision. Nobody wants to book a hotel that has only bad reviews. The expert Rainer says about this phenomenon: *"You know it, even when you go on vacation, you read through the evaluations and then make your decision whether to book or not."* Another expert Franziska confirms this statement once again: *"I mean, you know the same thing, if you want to book a trip, you first have to look into the evaluations. Something with few stars we would never recommend to customers."*

But the rating platforms also help companies to improve a lot. Because only through criticism, the enterprises can improve something. This is what the expert Frauke says about it: *"You can user some reviews or what unfortunately many people do, sit it out. There are things that can be changed and others that cannot be changed."* The ratings on such platforms are nowadays seen as advertising for the company. This is what expert Heidi says: *"90% of the guests fill out the online reviews. They are treated like advertising now."* However, the experts also say that caution is needed in these reviews. People misrepresent things or, as expert Heidi says, they get paid to write positive and negative reviews themselves.

"A lot of things are misrepresented, then you find out that people who were not even guests in the hotel are writing reviews. That these possibilities are left open, that there are people, who get paid to write positive and negative reviews." Fortunately, most guests take the chance to express their opinion very seriously and give objective criticism. Expert Heidi states: *"There are people who thankfully take this very seriously and fortunately, that is the majority and they describe their experience as it is."* As result in this point, it is to be stated that the evaluation platforms have a large influence on the reservation behavior, since many humans attach importance to the opinion of the others. Booking decisions are made based on the ratings. For hotels, these evaluations serve as means of publicity. The following recommendation can be made here. Companies should integrate the rating platform directly on their homepage and not via external providers. The hypothesis in the area of rating portals is: Potentials of digital business models have a positive influence on the booking behavior.

4 Conclusion

In this study, the potentials of digital business models in tourism were developed on the basis of empirical data from German experts. The following potentials were identified: Sales and profit turnover increase, reduction of process costs, sharing economy, customer rating platforms, personalized offers and social media. Tourist providers should increasingly implement their processes digitally and take advantage of the digital technologies that exist today and profit from the opportunities. With these technologies, everything runs much faster. Communication through rating portals, social media is also much faster and easier than a few years ago. Furthermore, the experts share the opinion that digital technologies can save a lot of time and money. The providers should use social media in any case, to win customers, to find personnel or to communicate with customers. Rating platforms play an important role in today's society. Hotels should integrate this into their Web sites. It is important that companies rethink their existing business models

and transform them into digital ones. Thanks to today's technologies, the corresponding search engines can be used to look for individual trips. Notwithstanding the extensive and beneficial results that have been obtained through this work, limitations must be mentioned as well. First of all, it should be noted that only German experts were interviewed for this research. Furthermore, the risks that are often mentioned in connection with opportunities in the social media sector were not considered in the evaluation. In conclusion, there is new potential in the area of social media and personalized offers, as these serve on the one hand as free advertising media and bind customers to the company in the long term.

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